RESPONSE OF
THE ENVIRONMENTAL LAW AND POLICY CENTER
TO
ELECTRIC POLICY COMMITTEE
QUESTIONS ON
DISTRIBUTED RESOURCES

1. *Please provide an exact definition of a distributed resource (DR). For example, is a distributed resource only small scale generation? If so, of what size? Should DSM services also be included in the definition?*

The term "distributed resources" encompasses a wide variety of decentralized supply and demand side resources that are best understood as not being traditional large centralized electric generating plants. Supply side distributed resources include fuel cells, micro turbines, renewable resources such as wind and photovoltaic power, reciprocating engines and combined heat and power (CHP) facilities. Demand side distributed resources include energy efficiency and load management. While many distributed resources will be relatively small and installed at the distribution level, some distributed resources, particularly CHP and some windpower projects will be larger and can be installed at either the distribution or transmission level.

Distributed resources include, but are not limited to, those supply and demand side resources that are "distributed" in specific locations so as to delay or eliminate the need for capital investment in new or enhanced distribution and transmission facilities.

- *How can DR be used either in conjunction with traditional utility service or as a stand-alone service to meet customers' demands?*

Distributed resources can be used in conjunction with traditional resources as back-up power to provide enhanced reliability, as peaking power to avoid high peak period rates, as base load power and, generally, any place on the system that will benefit from decreased need for enhanced or new distribution and/or transmission facilities.

Distributed resources can also be used as a stand-alone service in locations that require electric service, but that are not connected to the grid.

- *Can DR be effective in providing loading relief for transmission and distribution systems?*

Yes, when located in areas that require such relief. A well-designed and implemented planning process would ensure that the distributed resources are located at points on the system that will benefit from loading relief.

- *Should DR be considered when planning for and expanding the T&D system?*

Absolutely yes. Planning for new or enhanced distribution and transmission facilities should include a thorough analysis of whether distributed resources would provide a more cost-effective and environmentally preferable alternative.

- *What new technologies can be used in conjunction with DR to lower costs and improve service?*

Increased use of renewable resources (solar and wind), fuel cells, micro turbines and other distributed resources can result in lower per unit costs and new and improved technology. Lower costs and improved technology will result in further development of state of the art supply side resources that will, in turn, result in still lower costs, improved technology and increased reliability.

- *Are there any other benefits from DR (e.g., environmental)?*

Distributed resources can provide significant environmental benefits. Since distributed resources reduce the need to move energy over transmission and distribution lines, there will be significant reductions in line losses. Reduced line losses means less power production and, therefore, less of the emissions that are produced when power is generated.

Additional environmental benefits can result because distributed resources generally produce significantly less pollution than large centralized resources. In addition to the obvious environmental benefits of displacing energy produced at large fossil-fuel powered generating stations with clean renewable resources, there are also significant benefits when "cleaner" resources such as fuel cells, micro turbines and CHP displace older and dirtier power.

It is critically important to note that while most distributed resources offer significant environmental benefits, some distributed resources may not be environmentally preferable to the status quo. For example, use of dirty diesel generators to produce distributed energy should not be permitted.

- *What are the drawbacks of DR (e.g., utility operations, public health and safety, etc.)?*

Public health and safety would be jeopardized if encouragement of distributed resources resulted in increased use of dirty fuels such as diesel and reductions in local ambient air quality. This could be a particularly serious problem since the distributed resources would likely be used on hot summer days when air problems are the worst. Use of dirty fuels in distributed resources would also make it more difficult for Illinois to comply with federal air quality standards which, in addition to harming the public's health, could interfere with economic development in non-attainment areas such as Northern Illinois and the East St. Louis area.

Please include examples of currently deployed distributed resources either in Illinois or other jurisdictions and explain exactly what services (or value) these resources provide. (If providing examples of DR outside of Illinois, please indicate any unique features of the regulatory or legal environments of that jurisdiction that differentiate it from Illinois as it pertains to DR.)

Examples of currently deployed distributed resources in Illinois include energy efficiency, limited penetration of wind and photovoltaic power, CHP and limited penetration of micro turbines.

2. *What is the market penetration for DR in Illinois (include self-generation and co-gen if not included in your definition provided in question 1)?*

Unknown. This requires further research and analysis.

3. *What should the Commission's role, if any, be in promoting this market? If the Commission should have a role, please provide an outline of actions the Commission can take along with a timetable.*

The Commission should ensure that utilities thoroughly examine distributed resource alternatives to investment in enhanced and new distribution and transmission facilities. The Commission should examine its rates to remove barriers to cost-effective and environmentally preferable distributed resources. Interconnection tariffs, for example, should be reviewed and modified, as necessary, to ensure that they do not impede the development of cost-effective and environmentally preferable distributed resources. In addition, the Commission should encourage net metering in order to promote increased penetration of small scale renewable resources.

ELPC has not yet developed responses to the subparts of this question. We look forward to the opportunity to explore these questions in a future Commission proceeding.

- *How does the manner in which the Commission has unbundled delivery services from generation services impact the cost-effective application of distributed resources?*
- *What aspects of current delivery service rate design should be altered to facilitate the cost-effective deployment of DR?*
- *Should delivery service rates be geographically differentiated to provide the appropriate price signals to locate DR in areas that need distribution upgrades?*
- *Should the Commission develop a common set of interconnection rules/tariffs for the state?*
- *What other changes in legislation, rules, tariffs, unbundling polices and interconnection practices are needed to facilitate the deployment of cost-effective distributed resources?*

4. *What are the requirements in terms of metering, metering standards, data control and management, communications and utility operations for the central dispatch of distributed resources? (Please provide a summary of the assumptions made concerning the distributed resource technology, the structure of the electricity market and the nature of the distribution system used to formulate your answer.)*

ELPC has not yet developed a response to this question. We look forward to the opportunity to explore this question in a future Commission proceeding.

5. *What aspects of past distribution planning and deployment hinder the development of the DR market? Are there specific areas on any utility's system that are particularly problematic for DR? What actions can the Commission take to alleviate any perceived problems?*

Past distribution planning has not considered the availability of distributed resources as an alternative to increased investment in distribution facilities. As a result, distributed resources that might have been cost-effective at the time the distribution facilities were enhanced would not be cost-effective at this time. While some of those investments may be reversible, for example, it might be possible to move certain facilities to areas in which distributed resources are not viable alternatives, in most cases once the distribution facilities have been been enhanced, it is too late to reverse course and substitute distributed resources. Instead, the Commission and utilities should focus on doing better in the future by ensuring that future distribution planning considers the availability of distributed resources. Commonwealth Edison's current plan for major investments in new transmission and distribution makes this a particularly opportune time to consider the availability of distributed resources.

6. *Do the incentives currently inherent in the regulation of the incumbent electric utilities hinder or facilitate the cost-effective application of distribute resources by alternative suppliers? Please explain. If the current structure hinders efficient deployment, what changes are needed?*

Current incentives hinder the cost-effective application of distributed resources, by providing the pass-through of the costs of investing in the distribution system without any analysis as to whether distributed resources would have been a prudent alternative. As discussed above, the Commission should remove regulatory barriers to taking advantage of cost-effective and environmentally preferable distributed resources. Investments in distribution facilities that are not cost-effective and not environmentally preferable to distributed resources should be disallowed for ratemaking purposes.

7. *Does the incumbent utility have any market power associated with planning, leasing or dispatching DR? Is this any different from central station generation? Can that market power be mitigated? How?*

ELPC has not had the opportunity to develop a response to this question. We look forward to the opportunity to consider this question in some future Commission proceeding.

8. *What other issues or problems arise from the incumbent utility owning, operating and deploying DR?*

ELPC has not had the opportunity to develop a response to this question. We look forward to the opportunity to consider this question in some future Commission proceeding.

9. *How is the natural gas industry impacted by DR? Is there a need for changes in the rules, practices, tariffs or market structure to facilitate the cost-effective application of DR?*

ELPC has not had the opportunity to develop a response to this question. We look forward to the opportunity to consider this question in some future Commission proceeding.

10. *How does the deployment of DR impact competition for the <u>delivery</u> of power and energy?*

ELPC has not had the opportunity to develop a response to this question. We look forward to the opportunity to consider this question in some future Commission proceeding.

11. *Please provide any additional comments (you may include procedures for the Commission to address any issues that are of concern.).*

Distributed resources offer significant economic and environmental benefits to Illinois and its citizens. ELPC suggests that the Commission convene a notice of inquiry proceeding to identify and evaluate how to modify, or remove, regulatory barriers to the development of cost-effective and environmentally preferable distributed resources.